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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

DATE: 30 MAR 1990

SUBJECT: ACTION MEMORANDUM - Ceiling Increase for Southeast Rockford Groundwater Contamination Site (Site Spill ID #DK)

FROM: Kenneth Theisen, On-Scene Coordinator  
Emergency and Enforcement Response Branch

TO: David Ullrich, Acting Director  
Waste Management Division

THRU: Norman Niedergang, Acting Associate Division Director  
Office of Superfund *U/3/30/90*

PURPOSE

The purpose of this memorandum is to request your approval of a ceiling increase to conduct a time critical removal action at the Southeast Rockford groundwater contamination site located in Rockford, Illinois (See Figure I). On October 25, 1989, an Action Memorandum was approved in the amount of \$332,000 (see Attachment I) to mitigate the threats to human health posed by the presence of various volatile organic compounds (VOC's) in residential wells. This funding provided initial bottled water to approximately 185 homes. These homes were later converted to "point-of-use" drinking water systems. This request is for an additional \$1,626,500 to provide engineering support, materials and labor costs associated with extending and connecting the affected residences to the City of Rockford's municipal water supply system. The \$1,626,500 requested will bring the project total to \$1,995,500.

This site is on the National Priorities List. (NPL)

ENDANGERMENT FINDING

Conditions presently exist at the site which, if not addressed by implementing the response action documented in this Action Memorandum, will lead to an imminent and substantial endangerment to the public health or welfare or the environment.

BACKGROUND

The Southeast Rockford groundwater contamination site is a residential area of approximately two square miles located in the city limits (See Figure II). However, the area is unique in the fact that large areas of county exist as unincorporated "islands" surrounded by city. Consequently these areas lack many city services including city water. Although groundwater contamination was known to exist in the area as far back as 1984, it wasn't until March 1989 that the site was added to the NPL. The United States Environmental Protection Agency's (U.S. EPA) Emergency and Enforcement

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Response Branch's contractor, as part of the "90 day study" mandated by Administrator William Reilly, sampled two residential wells in the area in August. Results indicated the presence of numerous VOC's in the water; one in particular was in excess of U.S. EPA's Removal Action Level (RAL). The chemical, 1, 2-Dichloroethylene, was present in the amounts of 894 parts per billion (ppb) and 556 ppb respectively. This combined total of both the cis-and trans-isomers far exceeded the RAL for that chemical of 175 ppb for each of the isomers.

Bottled water was supplied to these residences while the Emergency Response Branch conducted an extensive sampling program in conjunction with an on-going effort by the Illinois Department of Public Health (IDPH). Over four separate sampling efforts a total of 118 samples were taken, the results studied and plotted on a contour map. This identified a plume over one mile long, trending west toward the Rock River, with the highest concentration of contamination occurring at the extreme eastern portion. Approximately 200 homes are affected and lie in the direct path of the plume. Although only the RAL's for individual chemicals were used to identify the homes at risk, the cumulative effect of the substantial amounts of additional chemicals present were also considered. These other chemicals include Trichlorethylene (TCE) in excess of 50% of its RAL OF 128 ppb, and 1,1,1-Trichloroethane (TCA) substantially in excess of 50% of its RAL of 500 ppb.

Residences were switched from bottled water to "point-of-use" drinking water filters by the middle of January. Although bottled water is a quick and effective means by which to mitigate a groundwater emergency, any continuous use of bottled water for longer than three or four months is not cost effective. This reason along with: too much water delivered, too little water delivered, freezing, too heavy for elderly residents and other reasons make bottled water the least desirable alternative. The use of filters is of course dependent upon the kinds and concentrations of the various chemicals involved.

Since conditions at this site meet the criteria for a removal action, the EERB's Emergency Response Cleanup Services Contractor (ERCS) has been at the direction of the OSC, doing engineering and design work with the intent of constructing an extension to the City of Rockford's water distribution network.

#### THREAT

The conditions at the Southeast Rockford groundwater contamination site meet the criteria for a removal action as stated in the National Contingency Plan (NCP) 40 CFR Section 300.415 (b)(2) as follows:

- 1) Actual or potential exposure to hazardous substances by nearby populations, animals or food chains.

Approximately 200 homes lie in the path of the plume movement where levels of both the cis- and the trans- isomers of 1,2-dichloroethylene were recorded up to 894 ppb. This compares to their respective RAL's of 175 ppb. Multiple contaminants exist in sufficient quantities (in excess of 50% of their RAL's) to pose an additional threat. Other contaminants include 1,1,1-trichloroethane up to 397 ppb (RAL = 500 ppb) and trichloroethylene up to 120 ppb (RAL = 128 ppb).

Extensive additional sampling was conducted by the IDPH which very closely matched the high risk area as defined by U.S. EPA. Their sampling also duplicated similar contaminants and concentrations.

#### ENFORCEMENT

See Enforcement Confidential Attachment II.

#### PROPOSED ACTIONS

The following actions are proposed to permanently address the human health threat found only in that area of the NPL site boundaries of the Southeast Rockford project that meet the necessary criteria for a removal action.

- 1) Complete engineering and design work for the project.
- 2) Install approximately 16,000 feet of water main to carry municipal water throughout the affected area.
- 3) Provide residential connections for the approximately 185 homes in the area.
- 4) Properly abandon the existing wells.

The detailed ERCS contractor cost breakdown is presented in Attachment III, with the estimated project costs presented below.

#### State and City Cooperation

The level of cooperation to which the IDPH and the City of Rockford have assisted the EERB in the preliminary aspects of this project has been outstanding. The IDPH granted to the EERB a waiver to a State plumbing code regulation enabling the prompt installation of drinking water filters at a small cost savings. The IDPH will also assist and monitor the well

abandonment phase of the project. The City of Rockford has agreed to waive all connection fees associated with the project. This will amount to approximately \$90,000 in savings. The City has also agreed to pay for any "oversizing" of water mains and has been very helpful in various administration requirements asked for by the OSC. The local Ken-Rock Community Center has also been very supportive in providing the OSC various requests for office and desk space and for approval to house his construction trailer in part of the community center's parking lot.

#### EXTRAMURAL COSTS

	<u>Previous Ceiling</u>	<u>Proposed Increase</u>	<u>New Ceiling</u>
ERCS Contractor	\$200,000	\$1,230,000	\$1,430,000
Contingency (15%)	<u>30,000</u>	<u>184,500</u>	<u>214,500</u>
Subtotal	\$230,000	\$1,414,500	\$1,644,500
TAT	\$ 30,000	-----	\$ 30,000
Extramural Subtotal	\$260,000	\$1,414,500	\$1,674,500
Extramural Contingency (15%)	<u>39,000</u>	<u>212,000</u>	<u>251,000</u>
TOTAL	\$299,000	\$1,626,500	\$1,925,000

#### INTRAMURAL COSTS

U.S. EPA Direct Costs (\$30/hr. x 400 Regional and 40 HQ hrs.)	\$ 13,000	\$ 17,000	\$ 30,000
U.S. EPA Indirect Costs (\$51/hr. x 400 Regional hrs.)	<u>20,000</u>	<u>20,000</u>	<u>40,000</u>
TOTAL	\$ 33,000	\$ 37,000	\$ 70,000
PROJECT CEILING	\$332,000	\$1,663,500	\$1,995,500

This action constitutes a final remedy to the imminent threat posed by the contaminated groundwater in the Southeast Rockford site. This remedy is consistent, and in fact will be identical to, at least part of the long-term remedial action. It continues to be anticipated that this project will be completed within one year.

This action includes all engineering requirements as per the City of Rockford's water utility. Any "oversizing" required by the city for future developments, but not necessarily needed to protect the health of the affected residents will be identified and will be contracted for and paid separately by the City of Rockford.

# RECOMMENDATION

This decision document represents the selected removal action for the Southeast Rockford site, in Rockford, Illinois, developed in accordance with CERCLA as amended by SARA, and, to the extent practicable, the National Contingency Plan. This decision is based on the administrative record for the site. (The attached index identifies the items that comprise the administrative record upon which the selection of the removal action is based. See Attachment IV).

Because the conditions at the Southeast Rockford groundwater contamination site in Rockford, Illinois meet the National Contingency Plan, 40 CFR Section 300.415 (b)(2) criteria for a removal action, your approval to complete this removal action is recommended. With your approval the project ceiling will be increased from \$332,000 to \$1,995,500 of which up to \$1,895,500 (\$1,430,000, plus up to \$214,500 of the cleanup contingency, plus up to \$251,000 of the extremum contingency) may be used for cleanup contractor costs. Please indicate your decision by signing below.

APPROVAL:

Wm. E. Munn (Acting)  
ACTING DIRECTOR WASTE MANAGEMENT DIVISION

DATE:

3/30/90

DISAPPROVAL:

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ACTING DIRECTOR WASTE MANAGEMENT DIVISION

DATE: \_\_\_\_\_

Attachments:

- I. October 25, 1989, Action Memorandum
- II. Enforcement Confidential Information
- III. Detailed Cleanup Contractor Cost Estimate

bcc: S. Janowiak, OS-210  
L. Peterson/E. Doyle, 5CS-TUB-3  
A. Bauman, 5HS-10  
R. Powers/R. Buckley, 5HS-GI  
R. Bowden, 5HS-12  
P. Schafer, 5HS-12  
R. Mancos, 5HS-12  
L. Fabinski, ATSDR, 5HS-10  
O. Warnsley, RP/CRU, 5HS-12  
T. Lesser, 5PA-14  
K. Theisen, 5HS-12  
(Contracting Officer)  
EERB Read File  
EERB Delivery Order File  
EERB Site File